

Combined Sewer Overflow Control Program

Protecting public health and the environment



Reducing overflows of combined stormwater, wastewater

During and following heavy rains when flows exceed the capacity of the sewer system in Seattle, the system can overflow into local waters. When that happens, about 90 percent of the combined volume of the overflows is stormwater; the rest is diluted sewage.

Since the mid-1970s, King County has worked closely with the City of Seattle to control these discharges of combined sewage and stormwater. The total number of overflows has dropped about 58 percent from the baseline estimated in 1981-83. That decrease reflects the progress so far in King County's program to reduce combined sewer overflows, or CSOs, to an average of one a year at each outfall.

Seattle wastewater usually flows to the county's West Point Treatment Plant, which began operating in 1966. Concerned citizens in 1958 had established a regional wastewater treatment and conveyance utility called Metro to solve water pollution problems. The utility, now part of King County, built wastewater facilities—interceptor pipes, pump and flow-regulator stations, and treatment plants—inside and outside Seattle. The existing system represents a \$3.7 billion public investment (in 2003 dollars).

King County's Wastewater Treatment Division is now upgrading, designing and building wastewater facilities to serve projected population growth of more than 1 million people. To meet growth and regulations, the county will spend more than \$2.6 billion (2003 dollars) on new and improved facilities during the next 30 years.



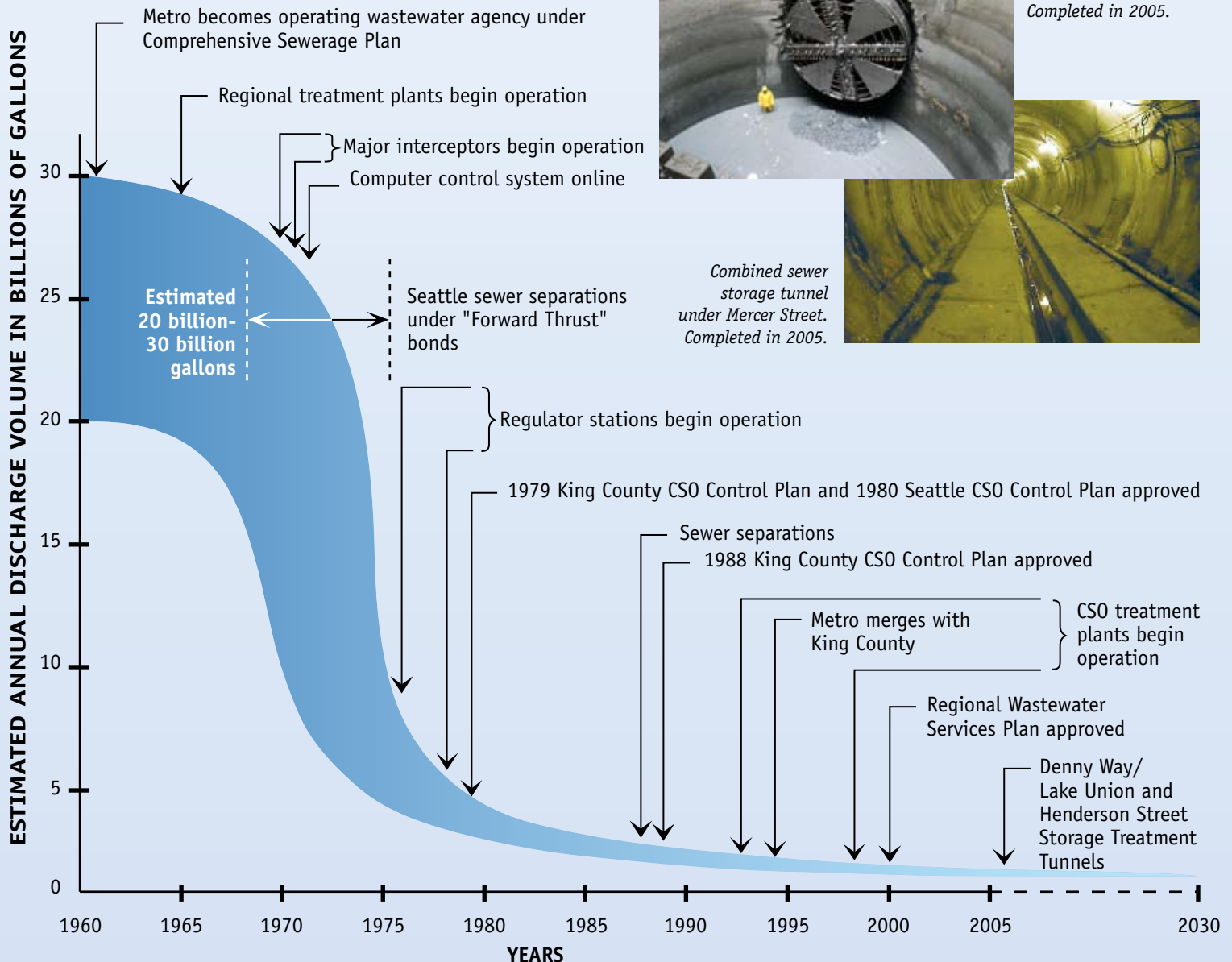
Controlling CSOs protects the public and the environment in Seattle.



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

King County CSO Reduction Since 1960



At a Glance: King County/Seattle CSO Control Program

In the 1950s, more than 20 billion gallons of untreated or poorly treated wastewater flowed from combined sewers into major Seattle lakes, the Duwamish River and Puget Sound. By the 1980s, efforts by King County and Seattle had reduced the CSO baseline to an average of 2.3 billion gallons per year. With construction of CSO control projects since then, King County by 2005 has reduced CSO volume to an average of less than 1 billion gallons per year.

King County and the City of Seattle share management of CSOs based on the size of the drainage basin served by each CSO outfall. The county manages CSOs from basins greater than 1,000 acres. The King County CSO program:

- began in the 1970s
- includes 47.5 square miles of combined sewers (within Seattle); about 20 percent of King County's service area
- manages 38 CSOs; City of Seattle manages 90 CSOs
- expects to complete CSO control by 2030 (21 projects left to be completed).

Creating Resources from Wastewater



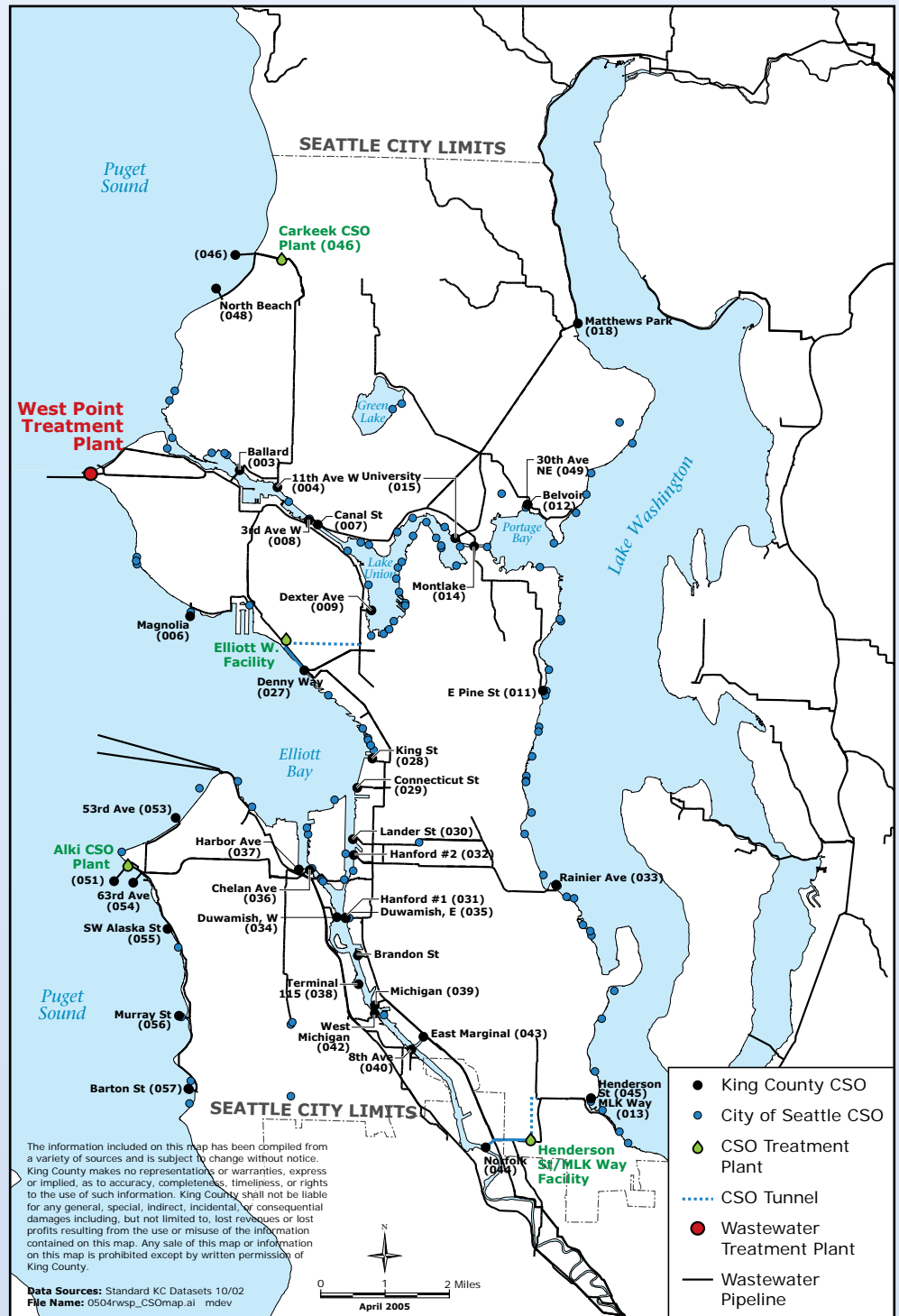
CSO locations are posted to notify the public of potential health risks

Storing and treating combined flows

To control overflows, the county program stores the combined flows until they can be treated at the West Point Treatment Plant, at two small CSO treatment plants, and even within two huge tunnels that store the combined stormwater and sewage. The two CSO plants, one in West Seattle near Alki Point and one in North Seattle, are former wastewater treatment plants for their communities.

King County in 2005 completed two major construction projects to store and treat combined sewage and stormwater with 15-foot-diameter tunnels. The 7.2-million-gallon Denny Way/Lake Union project controls all CSOs into Seattle's Lake Union and the county's largest CSO at Denny Way in Myrtle Edwards Park on Elliott Bay. The 4-million-gallon Henderson/Martin Luther King Way project brings the last uncontrolled county CSO into Lake Washington into compliance.

King County CSO Locator Map



Denny Way outfall in 1988.



Denny Way outfall removed in 2003, improving the Elliott Bay shoreline.

King County Today

King County government provides many public services including regional wastewater conveyance and treatment; public transit; public health; law enforcement; regional parks; solid waste disposal; and recycling.

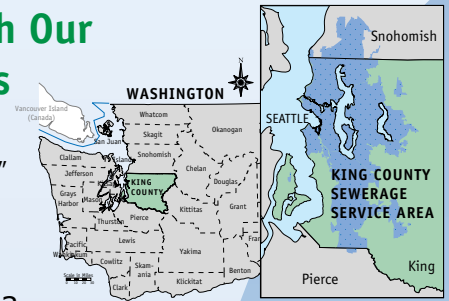


Artwork at flow regulator station in Myrtle Edwards Park

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Working with Our Communities

King County is a "wholesaler" of wastewater conveyance and treatment to Seattle and 33 other cities and local sewer agencies serving about 1.4 million people.



The county is committed to building facilities that are sensitively designed to meet the concerns of the community in which they are sited. Public art, landscaping, signs and architectural details are some ways we achieve that goal.

The county regularly monitors and assesses water quality near CSO outfalls. Its CSO water quality assessments include risk assessments and working with the community.

Creating Resources from Wastewater

Alternative formats on request
206-684-1280 TTY Relay 711

Or contact us at King County Wastewater
Treatment Division
206-684-1280

For more information check out our Web site at
<http://dnr.metrokc.gov/MTD/cso/>

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